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09/745,599	12/21/2000	Andrew K. Krumel	802-002	1187

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EXAMINER	
GOLD, AVI M	

ART UNIT	PAPER NUMBER
2157	

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/745,599	KRUMEL, ANDREW K.	
	Examiner	Art Unit	
	Avi Gold	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to the application filed December 12, 2000. Claims 1-58 are pending. Claims 1-58 represent methods and systems using PLD-based network communication protocols.

Specification

1. The disclosure is objected to because of the following informalities: status of related applications, 09/746,107 and 09/746,519, needs to be included and application 09/611,775 needs to be updated. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 27 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 27 recites the limitation "the plurality of commands". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-11, 17-31, 33-38, 41-43, and 48-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallside et al., U.S. Patent No. 6,326,806, in view of Klimenko, U.S. Patent No. 5,974,547 further in view of Hayes et al., U.S. Patent No. 6,374,318.

Fallside teaches the invention substantially as claimed including an FPGA configured as a communications access point and reconfiguration of an FPGA via a communications channel (see abstract).

As to claim 1, Fallside teaches a method for filtering packets from an external network using a programmable logic device-based system ("PLD system"), comprising the steps of:

operating the PLD system in accordance with first configuration data (col. 3, lines 50-60, Fallside discloses an initial configuration for the FPGA);

a second configuration data for the PLD system (col. 4, lines 15-26, Fallside discloses downloading of reconfiguration data);

loading the second configuration into the PLD system (col. 4, lines 15-26, Fallside discloses loading of reconfiguration data); and

operating the PLD system in accordance with the second configuration data (col. 4, lines 15-26, Fallside discloses the use of the reconfigured FPGA).

Fallside fails to teach the limitation further including wherein the PLD system filters packets from the external network in accordance with a first set of filtering rules based on the first configuration data; receiving a user input to the PLD system, wherein in response to the user input the PLD system operates to receive packets from a computing system coupled an internal network; sending at least a first packet from the computing system to the PLD system over the internal network; in response to the first packet, sending at least a second packet from the PLD system to the computing system over the internal network, wherein the second packet contains information identifying the PLD system and also information indicative of one or more commands in accordance with the protocol, wherein the PLD system operates in accordance with the one or more commands; in response to the second packet, sending at least a third packet from the computing system to the PLD system, wherein the third packet comprises a command in accordance with the protocol; and the PLD system filters packets from the external network in accordance with a second set of filtering rules based on the second configuration data.

However, Klimenko teaches an apparatus and methods, for us in a client-server environment for booting an operating system on a client computer through a networked connection to a server (see abstract). Klimenko teaches the use of the client comprising input interfaces (col. 8, lines 59-61), a client PC sending a request to the server (col. 9, lines 55-67, col. 10, lines 1-2), a reply packet sent from server to client,

including an IP address of the server and an initialization file (col. 10, lines 50-67, col. 11, lines 1-4), and a TFTP request sent by the client to the server (col. 11, lines 9-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallside in view of Klimenko to send packets, in response to each other, between the PLD system and the computing system over the internal network. One would be motivated to do so because it allows for the exchange of commands and information between the computing system and the PLD system.

However, Fallside and Klimenko fail to teach the use of the PLD system filters packets from the external network in accordance with a first set of filtering rules based on the first configuration data and the PLD system filtering packets from the external network in accordance with a second set of filtering rules based on the second configuration data.

However, Hayes teaches a filter circuit for a computer bus system (see abstract). Hayes teaches the use of the PLD filtering data based on controls (col. 6, lines 30-44).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallside and Klimenko in view of Hayes to use a system for filtering packets based on rules. One would be motivated to do so because it allows for only certain packets to be transferred from the external network, which can make for a more efficient packet forwarding.

Regarding claim 2, Fallside teaches the method of claim 1, further comprising the step of, after the third packet is received by the PLD system, saving the second

configuration data contained in the third packet in non-volatile memory of the system (col. 1, lines 58-64, Fallside discloses storage in flash memory).

Regarding claim 3, Fallside teaches the method of claim 2, wherein the non-volatile memory comprises Flash memory, electrically erasable and programmable read only memory or battery-backed-up random access memory (col. 1, lines 58-64).

Regarding claim 4, Klimenko teaches the method of claim 1, wherein a plurality of third packets are received by the PLD system, wherein, after receiving each of the third packets, the PLD system sends at least a fourth packet to the computing system over the network, wherein the fourth packets each acknowledge receipt of a corresponding one of the third packets (col. 11, lines 14-18, Klimenko discloses a boot filed downloaded to the client).

Regarding claim 5, Fallside teaches the method of claim 4, wherein after receiving each of the third packets, the PLD system saves second configuration data from the third packets in non-volatile memory of the system (col. 1, lines 58-64).

Regarding claim 6, Fallside teaches the method of claim 5, wherein the PLD system saves the second configuration data in the non-volatile memory of the system from each of the third packets prior to sending each of the fourth packets (col. 1, lines 58-64).

Regarding claim 7, Klimenko teaches the method of claim 5, wherein, after receipt by the computing system of a fourth packet that acknowledges receipt by the PLD system of a final third packet, the computing system sends at least a fifth packet to the PLD system, wherein, in response to the fifth packet, the PLD system saves one or more data indicating that all of the second configuration data has been received and stored in the non-volatile memory (col. 11, lines 17-22, Klimenko discloses a boot file downloaded to RAM and an acknowledgement sent to the server).

Regarding claim 8, Klimenko teaches the method of claim 1, wherein the second configuration data is loaded into the PLD system in response to a user command from a user (col. 11, lines 22-26, Klimenko discloses a client PC executing the boot file).

Regarding claim 9, Hayes teaches the method of claim 8, wherein the user command comprises a command input by a switch (col. 4, lines 45-54, Hayes discloses the use of a manually operated switch for a command).

Regarding claim 10, Hayes teaches the method of claim 9, wherein the switch comprises a physical switch on the PLD system (col. 4, lines 45-54).

Regarding claim 11, Hayes teaches the method of claim 8, wherein the user command comprises a command entered via the computing system (col. 4, lines 45-54).

Regarding claim 17, Fallside teaches the method of claim 1, wherein the PLD system processes packets sent from the computing system (col. 4, lines 15-26, Fallside discloses the processing of the reconfiguration of the FPGA).

Regarding claim 18, Fallside teaches the method of claim 1, wherein the PLD system extracts commands in accordance with the protocol from the packets sent from the computing system (col. 4, lines 15-26).

Regarding claim 19, Fallside teaches the method of claim 1, wherein the second packet includes a version identifier for the PLD system (col. 4, lines 15-26, Fallside discloses a configuration bitstream received via the communications channel).

Regarding claim 20, Fallside teaches the method of claim 1, wherein the second packet contains information that identifies a plurality of commands in accordance with the protocol to which the PLD system responds (col. 4, lines 15-26).

Regarding claim 21, Klimenko teaches the method of claim 1, wherein the second packet contains information that is indicative of a location coupled to the

network, wherein the location contains information that identifies a plurality of commands in accordance with the protocol to which the PLD system responds (col. 10, lines 50-67, col. 11, lines 1-4).

Regarding claim 22, Klimenko teaches the method of claim 21, wherein the location comprises storage coupled to the computing system (col. 10, lines 50-67, col. 11, lines 1-4, Klimenko discloses the network server location where a file is stored).

Regarding claim 23, Klimenko teaches the method of claim 21, wherein the location comprises storage on a second network, wherein the computing system accesses the storage via the second network (col. 10, lines 50-67, col. 11, lines 1-8, Klimenko discloses a network server differing from the server the boot file is on).

Regarding claim 24, Klimenko teaches the method of claim 23, wherein the information that is indicative of the location comprises an address of a node on the second network (col. 10, lines 50-67, col. 11, lines 1-8).

Regarding claim 25, Klimenko teaches the method of claim 23, wherein the second network comprises an Internet network (col. 10, lines 50-67, col. 11, lines 1-8).

Regarding claim 26, Klimenko teaches the method of claim 25, wherein the information that is indicative of the location comprises a URL (col. 10, lines 50-67, col. 11, lines 1-8).

Regarding claim 27, Klimenko teaches the method of claim 1, wherein the plurality of commands include one or more first commands to which the PLD system responds and also include one or more second commands to which the PLD system responds (col. 10, lines 50-67, col. 11, lines 1-8).

Regarding claim 28, Klimenko teaches the method of claim 27, wherein the first commands comprise core commands to which at least a second PLD system also responds (col. 10, lines 50-67, col. 11, lines 1-8).

Regarding claim 29, Klimenko teaches the method of claim 28, wherein the second commands comprise custom commands to which the second PLD system does not respond (col. 10, lines 50-67, col. 11, lines 1-8).

Regarding claim 30, Klimenko teaches the method of claim 1, wherein the network comprises a local area network (col. 7, lines 11-16, Klimenko discloses the use of LAN).

Regarding claim 31, Fallside teaches the method of claim 1, wherein the network comprises an Ethernet-based network (col. 4, lines 41-44, Fallside discloses the use of an Ethernet transceiver).

Regarding claim 33, Fallside teaches the method of claim 1, wherein at least certain of the first, second or third packets comprise TCP packets (col. 4, lines 1-2, Fallside discloses the use of TCP/IP).

Regarding claim 34, Fallside teaches the method of claim 1, wherein at least certain of the first, second or third packets comprise Ethernet packets (col. 4, lines 41-44, col. 10, lines 50-67, col. 11, lines 1-4).

Regarding claim 35, Fallside teaches the method of claim 1, wherein at least certain of the first, second or third packets comprise link layer packets (col. 4, lines 41-44, col. 10, lines 50-67, col. 11, lines 1-4).

Regarding claim 36, Fallside teaches the method of claim 1, wherein at least certain of the first, second or third packets comprise network layer packets (col. 4, lines 41-44, col. 10, lines 50-67, col. 11, lines 1-4).

Regarding claim 37, Fallside teaches the method of claim 1, wherein at least certain of the first, second or third packets comprise IP packets (col. 4, lines 41-44, col. 10, lines 50-67, col. 11, lines 1-4).

Regarding claim 38, Fallside teaches the method of claim 1, wherein at least certain of the first, second or third packets comprise transport layer packets (col. 4, lines 41-44, col. 10, lines 50-67, col. 11, lines 1-4).

Regarding claim 41, Fallside teaches the method of claim 1, wherein at least certain of the packets sent by the PLD system comprise packets having a predetermined source address that are directed to a second predetermined port (col. 4, lines 41-44, col. 10, lines 50-67, col. 11, lines 1-4).

Regarding claim 42, Fallside teaches the method of claim 1, wherein the PLD system does not implement a TCP/IP stack (col. 4, lines 9-11, Fallside discloses the use of Bluetooth on FPGA).

Regarding claim 43, Fallside teaches the method of claim 1, wherein the PLD system comprises an FPGA (col. 3, lines 50-60).

Regarding claim 48, Fallside teaches the method of claim 1, wherein the PLD system includes a first logic unit that processes packets sent by the computing system,

wherein the first logic unit identifies one or more commands in the packets sent by the computing system (col. 4, lines 15-26).

Regarding claim 49, Fallside teaches the method of claim 1, wherein the PLD system includes one or more second logic units coupled to the first logic unit that carries out one or more operations that correspond to the one or more commands (col. 4, lines 15-26, fig. 5, Fallside discloses a plurality of FPGAs).

Regarding claim 50, Fallside teaches the method of claim 49, wherein the PLD system includes one or more third logic units, wherein the third logic units carry out one or more logic operations that correspond to packets that the PLD system transmits to the computing system (col. 4, lines 15-26, fig. 5).

Regarding claim 51, Fallside teaches the method of claim 1, wherein the PLD system includes first and second logic portions, wherein a first logic portion operates to communicate packets in accordance with the protocol with the computing system, wherein the second logic portion operates to carry out a process that does not comprise communicating packets in accordance with the protocol with the computing system (col. 4, lines 15-26, fig. 5).

Regarding claim 52, Fallside teaches the method of claim 1, wherein the computing system operates in response to software that is transmitted to the computing

system from the PLD system (col. 4, lines 15-26, Fallside discloses a configuration bitstream).

Regarding claim 53, Fallside teaches the method of claim 1, wherein the computing system operates in response to software that is stored in a location identified by a packet from the PLD system (col. 4, lines 15-26).

Regarding claim 54, Fallside teaches the method of claim 53, wherein the location comprises a storage location on a second network coupled to the computing system (col. 3, lines 42-49, Fallside discloses a storage element).

Regarding claim 55, Fallside teaches the method of claim 54, wherein the location is identified by a network address or URL (col. 4, lines 41-44, col. 10, lines 50-67, col. 11, lines 1-4).

Regarding claim 56, Fallside teaches the method of claim 53, wherein the location is determined from an identifier for the PLD system (col. 4, lines 41-44, col. 10, lines 50-67, col. 11, lines 1-4).

Regarding claim 57, Fallside teaches the method of claim 1, wherein, after the PLD system operates in accordance with the first configuration data, in response to the user input the PLD system reconfigures to operate to receive packets in accordance

with the one or more commands and no longer operates in accordance with the first configuration data, wherein, after loading of the second configuration data, the PLD system operates in accordance with the second configuration data and no longer operates to receive packets in accordance with the one or more commands (col. 4, lines 1-26, Fallside discloses a reconfiguration of the FPGA after the initial configuration).

Regarding claim 58, Fallside teaches the method of claim 1, wherein the PLD system comprises programmable logic having at least a first logic portion and a second logic portion, wherein, in response to loading of the second configuration data, the second logic portion is reconfigured and the first logic portion is not reconfigured (col. 4, lines 1-26).

7. Claims 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallside, Klimenko, and Hayes further in view of Jung et al., U.S. Patent No. 5,745,229.

Fallside teaches the invention substantially as claimed including an FPGA configured as a communications access point and reconfiguration of an FPGA via a communications channel (see abstract). Klimenko teaches the invention substantially as claimed including an apparatus and methods, for us in a client-server environment for booting an operating system on a client computer through a networked connection to a server (see abstract). Hayes teaches the invention substantially as claimed including a filter circuit for a computer bus system (see abstract).

As to claim 12, Fallside, Klimenko, and Hayes teach the method of claim 1.

Fallside, Klimenko, and Hayes fail to teach the limitation further including wherein one or more display devices provide visual feedback of the status of the PLD system.

However, Jung teaches an apparatus for determining optical characteristics of an object (see abstract). Jung teaches the use of LCD and LEDs for display purposes (col. 6, lines 52-62).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallside, Klimenko, and Hayes in view of Jung to use a visual display to show status. One would be motivated to do so because it allows the user to see the status of the PLD system.

Regarding claim 13, Jung teaches the method of claim 12, wherein the one or more display devices comprise one or more LEDs (col. 6, lines 52-62).

Regarding claim 14, Jung teaches the method of claim 12, wherein the one or more display devices comprise a liquid crystal display (col. 6, lines 52-62).

As to claim 15, Fallside, Klimenko, and Hayes teach the method of claim 1.

Fallside, Klimenko, and Hayes fail to teach the limitation further including the PLD system providing audio feedback indicative of the status of the PLD system.

However, Jung teaches the use of audio feedback to guide an operator (col. 3, lines 46-50).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallside, Klimenko, and Hayes in view of Jung to use audio feedback with the PLD system. One would be motivated to do so because it allows the user to hear the status of the PLD system.

Regarding claim 16, Jung teaches the method of claim 12, wherein at least one LED indicates that the step of loading the second configuration data into the PLD system is in process (col. 6, lines 52-62)

8. Claims 32, 39, 40, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallside, Klimenko, and Hayes further in view of Fairchild et al., U.S. Patent No. 6,343,320.

Fallside teaches the invention substantially as claimed including an FPGA configured as a communications access point and reconfiguration of an FPGA via a communications channel (see abstract). Klimenko teaches the invention substantially as claimed including an apparatus and methods, for us in a client-server environment for booting an operating system on a client computer through a networked connection to a server (see abstract). Hayes teaches the invention substantially as claimed including a filter circuit for a computer bus system (see abstract).

As to claim 32, Fallside, Klimenko, and Hayes teach the method of claim 1.

Fallside, Klimenko, and Hayes fail to teach the limitation further including at least certain of the first, second or third packets comprise UDP packets.

However, Fairchild teaches a method and system for consolidating management state information of one or more devices attached to or participating in a network, and sending the consolidated information to one or more management servers (see abstract). Fairchild teaches the use of UDP packets (col. 11, lines 46-49).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallside, Klimenko, and Hayes in view of Fairchild to use UDP packets. One would be motivated to do so because they are known packets for data transfer.

Regarding claim 39, Fairchild teaches the method of claim 1, wherein at least certain of the first, second or third packets comprise IPX packets (col. 6, lines 20-25, Fairchild discloses the use of IPX)

Regarding claim 40, Fairchild teaches the method of claim 1, wherein at least certain of the packets sent by the computing system comprise broadcast packets having a predetermined address that are directed to a first predetermined port (col. 11, lines 46-49, Fairfax disclose the use of broadcast packets)

As to claims 44, Fallside, Klimenko, and Hayes teach the method of claim 1.

Fallside, Klimenko, and Hayes fail to teach the limitation further including the PLD system comprises an Internet security system.

However, Fairchild teaches the use of security for data found on the Internet (col. 5, lines 8-19).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallside, Klimenko, and Hayes in view of Fairchild to use an Internet security system. One would be motivated to do so because it only allows cleared packets to be transferred.

Regarding claim 44, Fairchild teaches the method of claim 44, wherein the Internet security system comprises a firewall system (col. 10, lines 25-28, Fairchild discloses the use of a firewall).

9. Claims 46 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fallside, Klimenko, and Hayes further in view of Zintel, U.S. Patent No. 6,779,004.

Fallside teaches the invention substantially as claimed including an FPGA configured as a communications access point and reconfiguration of an FPGA via a communications channel (see abstract). Klimenko teaches the invention substantially as claimed including an apparatus and methods, for us in a client-server environment for booting an operating system on a client computer through a networked connection to

a server (see abstract). Hayes teaches the invention substantially as claimed including a filter circuit for a computer bus system (see abstract).

As to claim 46, Fallside, Klimenko, and Hayes teach the method of claim 1.

Fallside, Klimenko, and Hayes fail to teach the limitation further including the PLD system comprising a device selected from the group consisting of a PDA, a mobile telephone, a portable computer, a game system, a household appliance, a video recording system and a paging device.

However, Zintel teaches adapting host-peripheral connectivity devices and services for access in a peer networking connectivity model (see abstract). Zintel teaches the use of a digital assistant, cell phone, VCR, game consoles, home appliances, and a pager (col. 7, lines 24-29, col. 45, lines 30-44, 64-67).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallside, Klimenko, and Hayes in view of Zintel to use many different devices. One would be motivated to do so because it allows for many devices to interact over a network.

As to claim 47, Fallside, Klimenko, and Hayes teach the method of claim 1.

Fallside, Klimenko, and Hayes fail to teach the limitation further including wherein the information identifying the one or more commands in accordance with the protocol to which the PLD system responds comprises XML code.

However, Zintel teaches the use of XML (col. 2, lines 64-67, col. 3, lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fallside, Klimenko, and Hayes in view of Zintel to use XML code. One would be motivated to do so because it is a known and useful markup language.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pat. No. 6,363,519 to Levi et al.

U.S. Pat. No. 6,151,625 to Swales et al.

U.S. Pat. No. 6,092,123 to Steffan et al.

U.S. Pat. No. 6,175,839 to Takao et al.

U.S. Pat. No. 5,343,471 to Cassagnol

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Avi Gold whose telephone number is 571-272-4002. The examiner can normally be reached on M-F 8:00-5:30 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Avi Gold

Patent Examiner

Art Unit 2157

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